27820
Medical Biofilm Techniques
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Daily staff:

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Practical information

- Experiments and talks
  - Short 10 min intro every day before the first lab session

- Work in the lab
    - Lab coats
    - Waste
    - P2 rules (for tagged *P. aeruginosa*). If anyone is pregnant let us know!

- Talks every day, Be there in time. All talks will be in this room

- Presentations at the last day
  - Treat data/results on the way so that you just have to put everything together in the end

- The manual
    - Schedule for the different experiments
    - Flowchart of the different experiments
    - List of speakers
    - Laboratory manuals and protocols
    - The flow systems
    - Additional protocols
    - Accompanying papers

- Valuables
- Teams
- The Coffee machine

The different exercises

- **5 different biofilm systems are going to be set up:**
- System 1: Development and architecture of *E. coli* biofilms
- System 2: FISH in biofilms(*P. aeruginosa and Acinetobacter* variants)
- System 3: Differentiation, structure development and colistin tolerance in *P. aeruginosa* biofilms
- System 4: *P. aeruginosa* mutants structure development and resistance
- System 5: Free Exercise
- Diagnostics
- Additionally:
  - The biofilm protocol
  - The FISH protocol
  - Adhesion assay
  - Conjugation/plasmid transfer
  - MIC determinations
  - Cell sorting (demo)
  - Quorum Sensing assays

Friday program

Sunday 19/8:

9:00	The exercises and practical information
10:00	**Technical Talk: Janus Haagensen and Claus Sternberg: Biofilms and tools, confocal microscopy and COMSTAT, Imaris and FACS.**
11:00	Tour of the institute and space in the lab.
12:00	Lunch. (cantina/kiosk/BYO)
1:00	Building Biofilm setups (All in all we will work on 5 systems during the course, each team of 3 will be responsible for 1 system with respect to media preparation and waste removal, all teams will work on all systems).
	Medium preparation for all biofilm systems.
3:00	Inoculation of already prepared and sterilized system 1 and 3.
	The free exercise: Sampling of bacteria from your own chosen environment (contact lenses, soil, plants etc). Isolation of bacteria/plating and incubation at different temperatures.
6:00	End of day 1

Experiments day 1

The Flow Chamber System

The standard set-up at DTU for hydro-dynamic biofilm development.

The flow-cells are mountable directly on the Confocal Microscopes for in situ investigations (Zeiss LSM510 or Leica DMRXA)